

Air Products/CRLP Well Work Overs
September 6, 2017

Attendees:

Sam Burton

Brent Gage

Alex Chau

Brad Beckley

Brock Van Anden

Shing Wong

- **Sam** – asks Alex how long the loop tuning will take.
 - **Alex** – it will take approximately the next 2 – 3 weeks
 - We have our contractor lined out for the next two weeks. They did discover that one of the lines was severely blocked off, and, will require repair.
 - They lifted water on one of the wells and manage to get production out of another well.
 - Two wells have benefitted from our recent efforts
 - All the wells have the original Air Products tuning parameters except for six which they recently modified. We are still trying to figure out why these six have their current settings.
 - Brent mentioned that you are trying to put an MOC in place for the K100 regarding the lowering of the input pressure.
- **Brad** – Yes.
 - In regards to the loop tuning did you say they are working on getting them on automatic now or that it is two weeks out?
 - **Sam** – they have talked with and worked with the contractor to schedule him for the loop tuning. So were are looking at a least a week.
 - When we had the meeting I had mentioned that despite who did the tuning we would have to make some changes to the K100. We have all

of that in place so the MOC is written and all of the TI&Ds are with it, and, everyone's has approved it. I just need the Plant Managers signature so I will take the documentation to Barry and get his signature.

- **Sam** – To affect the change will someone from Air Products be there?
- We have made to where it's a step-by-step system explaining what the new MOC is changing regarding shutdowns and alarms. It states exactly the step-by-step plan on how to gradually place the vibration in bypass, gradually increase the pocket loaders, and monitoring the vibration before placing it back in normal operation.
- **Brent** – Since it is a CRLP issue, and, if I were Nick DeMai, I would want to ensure my equipment was operating at its best capacity.
 - I honestly believe that it would be beneficial to have someone from the CRLP/Air Products on site.
 - I want to ensure that we do not have a vibrations problem or concern, and, if your or someone from your organization is here and a situations arises we can resolve it on the spot.
- **Brad** – Clearly we are running the K100 at a higher pressure ratio. We put an individual vibrations switch on each throw in addition to the main frame earthquake switch as well.
 - We have been monitoring the vibration(s) that have the individual switches on them.
- **Brent** – We will have to put the system on automatic, but I do not know how they are going to test the wells and set the tuning.
 - We may need to combine our thoughts and ideas as to the best approach concerning the loop tuning.
 - It will probably take more than one day to accomplish this task.

- I would like to start trying to move gas from the low helium wells to the high helium wells.
- **Brad** – So what we would do is complete the changes to the DCS for pressure alarms and shutdowns. Which can be done remotely by our engineering group.
 - We then would enable the vibration transmitters on each individual throw. We would also disable the earthquake switch. We will lower the suction pressure from 30 to 135 and then load up pockets by one turn and then observe the system.
- **Sam** – If we have the contractor available we should have him come in and do the initial loop tuning so the operators can observe how everything operates and works.
- **Brad** – I will be down this week in order to get Barry's signature on the MOC. This way he and Randy have the opportunity to review the MOC.
- **Brent**- Air Products will be paid one of two ways. Either CRLP will pay Air Products or the BLM will pay Air Products for their work.
- **Sam** – Nick and I know it does not matter how it gets paid. Whether it's charged to the CRLP or BLM it is all charged back to the storage holders.
 - Brad should have been paid under the contract when he sent the updated SWIM manuals.
 - Send it as an invoice to Nick DeMai, then Nick can send it as a line item for the agreement, then Joan can sign off on it.
 - We need to repair the louvers, it falls on BLM and is a safety concern regarding OSHA.